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10/527,010	03/07/2005	Barbara Hildegard Pause		1121

7590 08/12/2008  
Barbara Pause  
7161 Christopher Court  
Longmont, CO 80503

EXAMINER
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RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



### **DETAILED ACTION**

1. The Examiner has carefully considered Applicant's amendment and accompanying remarks filed May 9, 2008.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

3. Claims 1, 4, 5, 7, 13-15, and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Worley et al. (US 2003/0054141). Worley et al. disclose a coated article having enhanced reversible thermal properties. The coated article may be used in apparel and footwear (abstract). The substrate of the article may be a nonwoven fabric or a film [0016]. The coating may be formed from a polymeric material that has a temperature regulating material dispersed therein [0017]. The temperature regulating material will comprise one or more phase change materials [0032]. Examples of the phase change materials include hydrocarbons such as those listed on page 2 of the present specification (i.e. heneicosane, eicosane, nonadecane, octadecane, heptadecane, and hexadecane) and salt hydrates such as those listed on page 3 of the present specification (i.e. calcium chloride hexahydrate, lithium nitrate trihydrate, and sodium sulfate decahydrate) [0035 and Table 1]. These phase change materials having melting points ranging from 18.2-40.5°C. Worley et al. specifically disclose embodiments wherein the phase change material is non-encapsulated [0045].

Regarding Applicant's limitation requiring the film to be impermeable, Worley discloses that it is well known to have continuous (i.e. impermeable) coatings containing phase change material

that is to be applied to fabrics to provide enhanced reversible thermal properties to the fabrics themselves [0003].

Regarding Applicant's newly added limitation that the layers are bonded to each other using an adhesive, Worley discloses the use of a thermoplastic matrix which may serve to bind the temperature regulating material to the substrate [0046] and that the film or sheet may be attached or bonded to the substrate using a variety of methods [0056]. Therefore, Worley et al. reads on the garment having layers bonded to each other using an adhesive.

***Rejection is maintained.***

***Claim Rejections - 35 USC § 102/103***

4. Claim 21 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Worley et al. (US 2003/0054141). Worley et al. disclose the claimed invention except for the specific teaching that the article has a latent heat storage capacity between 40 KJ and 60 kJ.

Although Worley et al. do not explicitly teach the claimed latent heat storage capacity, it is reasonable to presume that this property is inherent to the Worley et al. invention. Support for said presumption is found in the use of like materials (i.e. nonwoven article comprising hydrocarbon or salt hydrate phase change materials dispersed within a polymeric material, wherein the phase change materials have a melting point of 18.2-40.5°C). The burden is upon Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In addition, the presently claimed property of a latent heat storage capacity between 40 KJ and 60 kJ would obviously have been present once the

Worley et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.

***Rejection is maintained.***

***Claim Rejections - 35 USC § 103***

5. Claims 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worley et al. (US 2003/0054141), as set forth above. Worley et al. disclose the claimed invention except for the different configurations claimed in the present invention (i.e. two barrier films and an inner fabric or a fabric and film). It would have been obvious to one having ordinary skill in the art to have used an additional film layer or an additional fabric layer in the article of Worley, motivated by the desire to create an article with improved flexibility and strength.

***Rejection is maintained.***

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worley et al. (US 2003/0054141), as shown above, in view of Buckley et al. (US 2002/0164474). Worley et al. disclose the claimed invention except for the teaching that the polymeric material which contains the phase change material is an elastomeric material.

Buckley disclose composite material useful in making garments such as socks, gloves, face mask, wet suits, or boot liners (abstract). The material comprises phase change material that has been incorporated into a flexible matrix [0012]. Suitable matrix materials include thermoplastic elastomers [0043]. It would have been obvious to one having ordinary skill in the art to have used Buckley's thermoplastic elastomer as the polymer matrix material of Worley et al., motivated by the desire to create a material that has both improved strength and flexibility.

***Rejection is maintained.***

***Response to Arguments***

7. Applicant's arguments filed May 9, 2008, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that the cited references do not teach the use of an adhesive to bond several layer of the barrier fabric. As shown above, this argument is not persuasive because Worley specifically discloses the use of a thermoplastic matrix which may serve to bind the temperature regulating material to the substrate [0046] and that the film or sheet may be attached or bonded to the substrate using a variety of methods [0056]. Therefore, Worley et al. reads on the garment having layers bonded to each other using an adhesive and the rejections are maintained.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/U. C. R./

/Ula C Ruddock/  
Primary Examiner, Art Unit 1794